

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. **(Currently amended)** A catheter-(4) for medical applications, suitable for being inserted into a duct (5)-comprising a first vessel (6)-and a second vessel-(7) which branches off from said first vessel-(6), the catheter (4)-comprising a catheter body-(10) which extends from a proximal end (12)-to a distal end-(16), said catheter body (10)-comprising a main cavity-(20), bounded by a lateral wall-(28), which passes through the catheter body (10) between the proximal end (12)-and the distal end-(16), suitable for receiving a guide cable for the insertion of the catheter (4)-into the first vessel-(6), and at least one opening-(24), disposed on the lateral wall (28)-at the distal end-(16) and suitable for perfusing a substance, characterized in that

the catheter body-(10), at a portion of the lateral wall (28)-comprised between said at least one opening (24)-and said distal end-(16), comprises

first and second occluding means-(60, 62), wherein the first occluding means-(60) are suitable for at least partially occluding a gap (63)-between the catheter body (10)-and an inner wall (32)-of the first vessel-(6), and the second occluding means-(62) can be associated internally with said main cavity (20)-and are suitable for at least partially occluding said main cavity-(20),

said first and second occluding means-(60, 62) defining a preferred direction of outflow of a fluid from the main cavity (20)-of the catheter body-(10) to the second vessel-(7), through said at least one opening (24)-of the catheter body-(10)-;

wherein all the openings pass through said lateral wall and are in fluid communication with the main cavity,

said at least one opening is such that the area of the at least one opening is not less than the area of the cavity of the distal end of the catheter body, and

said openings are not aligned with one another with respect to a main axis of extension of the catheter body.

**2. (Currently amended)** A catheter according to claim 1, wherein said first and second occluding means ~~(60, 62)~~ co-operate with each other to create a resistance to the passage of fluid through said distal end ~~(16)~~, favouring an outflow of fluid through said at least one opening ~~(24)~~.

**3. (Currently amended)** A catheter according to claim 1 ~~or 2~~, wherein said first and second occluding means ~~(60, 62)~~, at a portion of the catheter body ~~(10)~~ comprised between said at least one opening ~~(24)~~ and said distal end ~~(16)~~, substantially effect the occlusion of the first vessel ~~(6)~~ into which the catheter ~~(4)~~ is inserted, so as to direct a flow of fluid into the second vessel ~~(7)~~, through said at least one opening ~~(24)~~.

**4. (Currently amended)** A catheter according to ~~any one of the preceding claims,~~ claim 1, wherein said first occluding means ~~(60)~~ comprise an inflatable element ~~(64)~~ positioned round the catheter body ~~(10)~~, said inflatable element ~~(64)~~, in a rest state, adhering substantially to the catheter body ~~(10)~~, and in a working state being substantially in contact with an inner wall ~~(32)~~ of said first vessel ~~(6)~~.

**5. (Currently amended)** A catheter according to claim 4, wherein said inflatable element ~~(64)~~ is in fluid connection with the proximal end ~~(12)~~ so as to be operable from said proximal end ~~(12)~~.

**6. (Currently amended)** A catheter according to ~~any one of the preceding claims,~~ claim 1, wherein said catheter body ~~(10)~~ comprises a secondary cavity ~~(36)~~, which extends from the proximal end ~~(12)~~ to the distal end ~~(16)~~ and is hermetically separated from said main cavity ~~(20)~~, said secondary cavity ~~(36)~~ being in fluid connection with said first occluding means ~~(60)~~ so as to permit the actuation of said first occluding means ~~(60)~~.

**7. (Currently amended)** A catheter according to claim 6, wherein said secondary cavity ~~(36)~~ is produced in a thickness of said lateral wall ~~(28)~~ of said catheter body ~~(10)~~.

**8. (Currently amended)** A catheter according to claim 6 or 7, wherein the catheter body ~~(10)~~ has an oval cross-section having a first pole ~~(37')~~ more pronounced than a second

pole (37'')-diametrically opposed to the first pole-(37'), so that the lateral wall-(28), at the first pole-(37'), receives said secondary cavity-(36).

9. **(Currently amended)** A catheter according to ~~any one of the preceding claims,~~claim 1, wherein said second occluding means (62)-comprise an occluding body-(68), suitable for being introduced into said main cavity-(20), and an insertion cable (72)-firmly connected to said occluding body-(68) so as to allow the insertion of the occluding body (68) through the main cavity-(20).

10. **(Currently amended)** A catheter according to claim 9, wherein said occluding body-(68) is substantially spherical in shape.

11. **(Currently amended)** A catheter according to claim 9, wherein said occluding body-(68) is substantially frustoconical in shape.

12. **(Currently amended)** A catheter according to ~~any one of the preceding claims,~~claim 1, wherein said catheter body-(10), at said distal end-(16), comprises a portion with tapered profile (46)-so as to reduce the cavity of the catheter body (10)-at the distal end-(16).

13. **(Currently amended)** A catheter according to ~~any one of the preceding claims,~~claim 1, wherein said second occluding means-(62), at said distal end-(16), comprise a membrane (76)-suitable for at least partially occluding said main cavity-(20) and having a hole (80)-suitable for allowing the passage of the guide cable of said catheter-(4).

14. **(Currently amended)** A catheter according to claim 13, wherein said membrane(76) is firmly connected to the distal end (16)-of the catheter body-(10).

15. **(Currently amended)** A catheter according to ~~any one of the preceding claims,~~claim 1, wherein said second occluding means-(62) are made of a material suitable for being sterilized.

16. **(cancelled)**

**17. (cancelled)**

**18. (Currently amended)** A catheter according to ~~any one of the preceding claims,~~ claim 1, comprising, at said proximal end ~~(12)~~, a main pathway ~~(96)~~, suitable for receiving said second occluding means ~~(62)~~ and fluidly connected to said main cavity ~~(20)~~.

**19. (Currently amended)** A catheter according to claim 18, wherein said main pathway ~~(96)~~ comprises a threaded section ~~(100)~~ capable of producing a threaded connection with a corresponding threaded portion of said second occluding means ~~(62)~~.

**20. (Currently amended)** A catheter according to ~~any one of the preceding claims,~~ claim 1, wherein said proximal end ~~(12)~~ comprises a secondary pathway ~~(108)~~, fluidly connected to said secondary cavity ~~(36)~~, and suitable for receiving at the inlet a fluid for allowing the actuation of said first occluding means ~~(60)~~.

**21. (Currently amended)** A catheter according to ~~any one of the preceding claims,~~ claim 1, wherein said proximal end ~~(12)~~ comprises an infusion pathway ~~(112)~~, fluidly connected to said main cavity ~~(20)~~ and suitable for receiving at the inlet a fluid, so as to allow the flow of the fluid from the proximal end ~~(12)~~ to the distal end ~~(16)~~.

**22. (Currently amended)** A method for the use of a catheter according to ~~any one of the preceding claims,~~ claim 1, said catheter ~~(4)~~ comprising first and second occluding means ~~(60, 62)~~ said method comprising the steps of:

inserting the catheter ~~(4)~~ into a first vessel ~~(6)~~, by means of a guide cable, so that the distal end ~~(16)~~ of the catheter ~~(4)~~ passes beyond the branching ~~(8)~~ from which starts the second vessel ~~(7)~~ into which it is intended to perfuse a substance;

withdrawing the guide cable and inserting the second occluding means ~~(62)~~;

actuating the first occluding means ~~(60)~~ so as to occlude at least partially the gap ~~(63)~~ between the catheter body ~~(10)~~ and the inner wall ~~(32)~~ of the first vessel ~~(6)~~;

injecting the substance into the main cavity ~~(20)~~ of the catheter ~~(4)~~ so as to direct the substance from the at least one opening ~~(24)~~ of the lateral wall ~~(28)~~ of the catheter body ~~(10)~~ to the bifurcation ~~(8)~~ from which the second vessel ~~(7)~~ starts.

23. **(currently amended)** The method of claim 22, wherein the first vessel is a subclavian artery and the second vessel is a mammary artery.

24. **(New)** A catheter according to claim 1, wherein said openings are disposed substantially in a helical direction with respect to the main axis of extension of the catheter body.